

Appln. No. 10/044,281
Preliminary Amendment dated May 23, 2003

LISTING OF CLAIMS:

1. (Currently Amended) An ink cartridge for an ink jet printer, comprising:
a housing having at least one wall;
at least two ink chambers for containing different ink accommodated in said
housing;
and
ink supply ports formed in one wall of said housing within each of said ink
chambers, each of said ink supply ports having an inner opening and an outer opening,
wherein a first distance from said inner opening of a first ink supply port to that of
a second ink supply port adjacent to said first ink supply port is different from a second distance
from said outer opening of said first ink supply opening-port to that of said second ink supply
port.
- (A)
2. (Original) The ink cartridge of claim 1, wherein said first distance is greater
than said second distance.
3. (Original) The ink cartridge of claim 1, further comprising:
ink supply passages at least partly defining said ink supply port, each of said ink
supply passage projecting inward said housing from a bottom wall of said housing, said ink
supply passage communicating with said respective ink chamber at an inner end thereof; and
porous members impregnated with ink and fitted in each of said ink chambers and
engaging with said ink supply port through said ink supply passage.

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4. (Original) The ink cartridge of claim 1, wherein said ink chamber comprises three chambers separated from one another.

5. (Original) The ink cartridge of claim 1, wherein said ink chamber comprises five chambers separated from one another.

6. (Original) The ink cartridge of claim 3, wherein each of said ink supply port compresses said respective porous member.

7. (Original) The ink cartridge of claim 3, wherein each of said ink supply passages is disposed at substantially a center of said respective ink chamber.

8. (Original) The ink cartridge of claim 6, wherein said angled surface is arcuated.

9. (Original) The ink cartridge of claim 6, wherein said inner surface of said ink supply port is entirely angled.

10. (Original) The ink cartridge of claim 8, wherein the height of said protrusion member is higher than that of said projecting edge when said filter is secured onto said projecting edge.

11. (Original) The ink cartridge of claim 8, wherein said protrusion member comprises two or more elongated protrusions.

12. (New) An ink cartridge for an ink jet printer having a plurality of ink supply needles communicating with a print head, the ink cartridge comprising:
an ink cartridge main body;

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a partition wall dividing the ink cartridge main body into a plurality of ink chambers having respective ink outflow ports;

a plurality of ink supply ports adapted to receive and connect to the respective ink supply needles, and disposed on a bottom surface of the ink cartridge main body so that ink in the ink chambers can flow from the ink outflow ports to the ink supply ports, respectively, wherein:

each of the ink outflow ports is disposed substantially on a central line of the corresponding ink chamber in a width direction thereof;

the ink supply ports of the ink chambers are arrayed in the same array pitch that is different from an array pitch of the ink outflow ports; and

one of the ink supply ports, located at an end of the array is disposed substantially on the central line of the corresponding ink chamber in the width direction thereof.

13. (New) An ink cartridge for an ink jet printer having a plurality of ink supply needles communicating with a print head, the ink cartridge comprising:

an ink cartridge main body;

a partition wall dividing the ink cartridge main body into a plurality of ink chambers having respective ink outflow ports;

a plurality of ink supply ports adapted to receive and connect to the respective ink supply needles, and disposed on a bottom surface of the ink cartridge main body so that ink in the ink chambers can flow from the ink outflow ports to the ink supply ports, respectively,

through-holes, each including a plurality of recessed portions offset one from another to absorb a difference in array pitch between the ink supply ports and the ink outflow

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ports, wherein the ink outflow ports communicates via the through-holes with the ink supply ports, respectively.

14. (New) The ink cartridge of claim 13, wherein the though-hole is formed such that the plurality of recessed portion having respective different sizes are arranged with their axes not coincident with one another, in order to absorb the difference in array pitch between the ink supply ports and the ink outflow ports.

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15. (New) The ink cartridge of claim 13, wherein each one of the ink supply ports contacts adjacent one of the ink supply ports.

16. (New) The ink cartridge of claim 15, wherein a frame member is formed around an outer periphery of the ink supply ports, and connected to the ink supply ports by ribs.

17. (New) The ink cartridge of claim 14, wherein the recess is larger in size as the recess is closer to the ink supply port.

18. (New) The ink cartridge of claim 14, wherein the though hole for communication between the ink supply port and the ink outflow port having a large offset amount from the ink supply port includes the recess which is adjacent to the ink outflow port and which is oval in section having a major diameter in the offset direction.

19. (New) The ink cartridge of claim 14, wherein the through-holes are formed by abutting an upper molding die and a lower molding die against each other.

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20. (New) An ink cartridge for an ink jet printer having a plurality of ink supply needles communicating with a print head, the ink cartridge comprising:

an ink cartridge main body;

a partition wall dividing the ink cartridge main body into a plurality of ink chambers having respective ink outflow ports;

a plurality of ink supply ports adapted to receive and connect to the respective ink supply needles, and disposed on a bottom surface of the ink cartridge main body so that ink in the ink chambers can flow from the ink outflow ports to the ink supply ports, respectively, wherein:

an array pitch of the ink outflow ports is different from an array pitch of the ink supply ports;

the ink chambers communicates with the ink supply ports via respective through-holes, each formed as continuous recessed portions;

the recessed portions vertically arranged are disposed so that their axes are offset from one another to absorb a difference in array pitch between the ink supply ports and the ink outflow ports.

21. (New) The ink cartridge of claim 13, wherein in each of the through-holes, a central axis of the recessed portion closer to the ink chamber is offset from a central axis of the recessed portion closer to the ink supply port.

22. (New) The ink cartridge of claim 13 and 20, wherein the axes of the recessed portion are offset in the array direction of the ink supply ports.

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23. (New) The ink cartridge of claim 12, 13 or 20, wherein a protruding portion is formed in each of the ink chambers, a porous member is accommodated within each of the ink chambers so as to contact corresponding one of the protruding portions, and each of the outflow ports is opened at an apex portion of corresponding one of the protruding portions.

24. (New) The ink cartridge of claim 13 or 20, wherein each of the ink outflow ports is located substantially on a central line of corresponding one of the ink chambers in a width direction thereof.

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25. (New) The ink cartridge of claim 13 or 20, wherein the recessed portion located just below each of the ink chambers is located on a central line of the each ink chamber in a width direction thereof.

26. (New) The ink cartridge of claim 12, 13 or 20, wherein the ink supply ports are arrayed in the same array pitch, and entirely offset toward an end of the array.

27. (New) The ink cartridge of claim 26, wherein each one of the ink supply ports contacts adjacent one of the ink supply ports.

28. (New) The ink cartridge of claim 27, wherein a frame member is formed around an outer periphery of the ink supply ports, and connected to the ink supply ports by ribs.

29. (New) The ink cartridge of claim 20, wherein a positioning protrusion is formed on a side wall forming the ink chambers.